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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,642	04/25/2005	Seung-Hyun Kim	26743U	5782

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NATH & ASSOCIATES
112 South West Street
Alexandria, VA 22314

EXAMINER	
PALO, FRANCIS T	
ART UNIT	PAPER NUMBER
3644	
MAIL DATE	DELIVERY MODE
11/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/532,642	KIM, SEUNG-HYUN	
	Examiner	Art Unit	
	Francis T. Palo	3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6 and 7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6 and 7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 June 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

The substitute specification filed 5/16/07 has been entered and acknowledged, as well as the cancellation of claims 4 and 5 and introduction of new claims 6 and 7.

Applicant's arguments filed 5/16/07 have been fully considered but they are not persuasive.

Applicant submits that, "**there is no suggestion in the reference of the desirability of pelletilizing plant seeds which, by definition, facilitates the distribution of the plant seed during the planting process, whether or not the planting is conducted beneath the surface of the ground or on the surface of the ground as defined by claim 6 of the present application.", and further, that Melvold '989, "does not contemplate and, in fact, it would not be possible to plant the plant wafers in the ground"**.

Whereas Melvold is silent as to sowing on the ground without covering with earth, as recited in the new independent method claim-6, and as argued, the assertion that this is not possible is not convincing, as aerial sowing and the sowing of seed balls by throwing or placement on the soil are well-known sowing methods in the arts, and while not specifically taught by Melvold,

would be an obvious sowing step to one of ordinary skill in the art to try, as well as to anyone who has purchasing commercially available seed balls. Further, Melvold teaches square, rectangular, **round**, or other shapes (col.-4, line-1), wherein a round formed shape provided with a cavity is broadly readable on the instant invention.

Applicant further argues that, "**in Melvold '989 the bitumen is used as a binder for the peatmoss whereas in the present invention a water-soluble glue is utilized to facilitate a mixture of peatmoss with fertilizers and other plant nutrients**".

As submitted in the previous office action mailed 11/16/06, Melvold teaches nutrients and fertilizer ingredients can be incorporated prior to addition of the binder (col.-7, line-4 thereabout) and, while Melvold '989 is specific to a bituminous binder in the '989 patent (but not exclusive to), he references his US 3,375,607 patent in the *Background of the Invention* discussion, which teaches as prior art, the use of a water soluble binder ('607; col.-7, line-68 thereabout) as claimed in the instant invention.

Applicant further submits that, "**the claims of the present application reflect the desirability of controlling the moisture content of the mixture of fertilizer, plant growth regulator, insecticide, peatmoss, water-soluble glue, and the like to an amount of 15-25% by weight in order to avoid premature germination**", and that, "**the typical moisture content of standard commercial peatmoss which is utilized therein falls within the range of 25-50% by weight**",

and that, "**Melvold '989 is concerned with the formation of plant wafers whereas the present invention is directed to the formation of pellets for housing plant seeds**".

Applicant's argument appears to be directed to the initial moisture content of the peatmoss utilized in Melvold, whereas the amended and new claims recite, "**a water content of 15-25% by weight** ", following mixing and forming steps as claimed; The moisture content of the as received and initially utilized peat moss of Melvold is not germane to the invention as claimed. Further, Melvold teaches it is essential to appreciably reduce the water content of the mix prior to its compression until the moisture content of the total mix is reduced below 25% by weight, and that typical advantageous moisture contents for compression, range from about 15-25%, as claimed.

Again, whereas Melvold '989 is focused on wafers as argued, the reference also contemplates square, rectangular, **round**, or other shapes (col.-4, line-1), wherein a round formed shape provided with a cavity is broadly readable on the instant invention.

Applicant concludes that, "**Melvold '989 is directed to an invention which does not even remotely contemplate the Applicant's inventive contribution for the reasons set forth hereinabove**". The examiner respectfully submits that as best can be determined from the original and rewritten disclosure,

Melvold alone and/or in combination with the prior art teachings, fairly well renders obvious the instant invention, which as yet lacks conveyance through the claims, what the contribution to and distinction in the useful arts is. The examiner concludes that applicant's use of the term "pellet" in verb or noun usage as claimed, does not serve to distinguish seeds as coated by the many materials known in the arts, or encapsulated in manufactured peat moss forms or as utilized in the well known seed balls commercially available, from the presumed hand formed mixtures of peat moss with additives of the instant invention which are intended to enclose various seed and tuber piece forms, and that the use of seed balls is presumed to have begun in Greece in 1998 and arguably by the North American natives to protect seeds from being blown away or eaten by birds, by hiding seeds inside little balls of clay.

Specification

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors, such as "palletized" in [0025] and [0041].

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

Claims 1, 2, 6 and 7 are objected to because of the following informalities: Appropriate correction is required.

In step (d) of **claim-1**, the first instance of "to" should be changed to "in"; the step of "pressing and sealing the hole" as recited, should be changed to "pressing and sealing the hole with peatmoss or said mixture", as recited in [0016] of applicant's disclosure, as "pressing and sealing" as recited in the claim infers a process which is not enabled by the specification (that is, pressing and sealing without a filler).

In **claim-2** the soybean variety "Whanggeum" is recited, this variety is unknown to the examiner.

In **claim-6**, the symbols within parenthesis are unnecessary as they do not serve to further distinguish over their respective listed elements; the language in step (e) directed to the fertilizer should be included in step (a).

In **claim-7**, "GA" should be replaced by "gibberellic acid".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as anticipated by or,

in the alternative, under 35 U.S.C. 103(a),

as obvious over **Melvold** (US 3,883,989) 1875.

Regarding amended **claim-1**:

Melvold '989 teaches a method of pelletizing plant seed, that is, "a method for producing single and multiple plant growing units", (col.-1, line-38 thereabout), wherein a plant seed is depicted within the cavity shown in figure-3.

Specifically, Melvold discloses in the *Summary of the Invention*, an aqueous bituminous emulsion is admixed with peat moss, the admixture is partially dried, bodies are formed of the admixture and the bodies are compressed to form rigid bodies, such as wafers or plates, or such shapes as square, rectangular,

round or other shapes (col.-4, line-1).

Melvold further teaches nutrients and fertilizer ingredients can be incorporated prior to addition of the binder (col.-7, line-4 thereabout).

Melvold further teaches that the bitumen serves as a binder in the peat moss (col.-1, line-55 thereabout), and discloses in the *Background of the Invention* having previously suggested ways of eliminating the external shape-confining means in his previous '607 patent, such as mixing the peat moss with a synthetic resin, glue, or binder (col.-1, line-22 thereabout), presumably the teaching of a glue would encompass the use of a water-soluble glue as claimed in the instant invention.

Whereas Melvold teaches an aqueous bituminous emulsion as a binder in the '989 patent, and glue in general in the '607 patent referenced in the *Background of the Invention*, the examiner submits that the use of glue would encompass water-soluble glue as claimed, as they are well-known in the art, and to have substituted a water-soluble glue for the aqueous bituminous emulsion as taught by Melvold '989 would have been within the technical grasp and general knowledge of one skilled in the art at the time the invention was made, as where a claimed improvement on a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement," the claim is unpatentable under 35 U.S.C. 103(a).

Ex Parte Smith, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007) (citing KSR v. Teleflex, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)).

Accordingly Applicant claims a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing KSR, 127 S.Ct. at 1740, 82 USPQ2d at1396.

Accordingly, since the applicant has submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a) because it is no more than the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement.

In the alternative, Bishop '537 for instance, could have been relied upon for the teaching of admixing Carib-peat (another form of peat) with a water-soluble adhesive for the same rational as discussed above.

As regards the drying step claimed in 1(c), and as discussed above in the response to applicant's *Remarks*, Melvold teaches it is essential to appreciably reduce the water content of the mix prior to its compression until the moisture content of the total mix is reduced below 25% by weight, and that typical advantageous moisture contents for compression, range from about 15-25%, as claimed (col.-3, lines 26-40 thereabout).

As regards the hole making step as claimed, Melvold further teaches seed planting holes or recesses can be formed in the bodies during the compression molding operation (col.-4, line-40 thereabout) or cutting or punching a hole after expanding the compressed unit (col.-5, line-20 thereabout) or planting seed directly into the expanded body without pre-forming holes (col.-5, line-16 thereabout).
Melvold further teaches loose peat moss or other planting medium can be filled in above the seeds, such as in the holes (col.-5, line-24 thereabout).

Regarding **claim-2**:
The discussion above regarding claim-1 is relied upon.
Melvold is not specific to the seed type as claimed, but rather teaches employment of the wafer-type bodies for starting seeds (col.-4, line-55 thereabout) in general.
In the absence of any stated problems solved by or any advantage obtained by utilizing specific seed type as claimed in the instant invention,

it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have utilized the ornamental seed species as claimed, as further such modification is merely an alternate equivalent seed material performing the same intended function, that is, calendula and salvia and soybean being well-known seeds.

Regarding amended **claim-3**:

The discussion above regarding claim-1 is relied upon.

The pellet as claimed is considered to be inherent to claim-1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim-6 is rejected under 35 U.S.C. 103(a),

as being unpatentable over **Melvold** '989,

in view of **Making Seed Balls** (PathtoFreedom.com) 2002.

Regarding new independent **claim-6**:

The discussions above regarding claims 1 and 2 are relied upon for the method steps common to both independent claims and claim-2; specifically, only the sowing limitation recited in step (d) is addressed herein this discussion.

Melvold is not specific as to sowing on the ground without covering with soil as claimed. *Making Seed Balls* teaches sowing balls of seeds as claimed, specifically calendula (marigold) as recited in the new instant independent claim.

As has been discussed above in the response to applicant's arguments and in the rejection of claim-1, Melvold teaches the admixture is partially dried, bodies are formed of the admixture and the bodies are compressed to form rigid bodies, such as wafers or plates, or such shapes as square, rectangular, **round** or other shapes (col.-4, line-1).

It is submitted, that it would have been within the grasp of one of ordinary skill in the art at the time the invention was made, to have broadcast the compressed round rigid bodies of Melvold containing seed, onto the surface of the ground as claimed, and as taught by the method disclosed in *Making Seed Balls*, wherein balls of clay and organic compost containing seeds of calendula (as claimed) in particular, are broadcast onto dirt areas (see step six) without covering with earth as claimed;

as where a claimed improvement on a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement," the claim is unpatentable under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007) (citing KSR v. Teleflex, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)).

Accordingly, Applicant claims a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing KSR, 127 S.Ct. at 1740, 82 USPQ2d at1396.

Accordingly, since the applicant has submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a), because it is no more than the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement.

Claim-7 is rejected under 35 U.S.C. 103(a),

as being unpatentable over **Melvold** and ***Making Seed Balls***,

as applied to claim-6 above,

and further in view of **Kitamura** (US 4,250,660) 1981.

Regarding new **claim-7**:

The discussion above regarding claim-6 is relied upon.

Melvold as modified, while teaching incorporation of nutrients and fertilizers (col.-7, line-4 thereabout) to an admixture of peatmoss and water soluble glue, does not specifically teach incorporation of a growth hormone as claimed.

Kitamura '660 teaches mixing peat moss with an aqueous solution of a water-soluble binder, drying the mixture, powdering the mixture and then coating seed using the powder (see '660 claims 1 and 2); Kitamura further discloses, "As is well-known to the skilled in the art, additives such as growth hormone compounds, fungicides and coloring agents may be added to these powders" (col.-1, line-58 thereabout).

It is submitted that, it would have been within the grasp of one of ordinary skill in the art at the time the invention was made, to have added a plant growth hormone to the admixture of Melvold as modified, as claimed, and as taught by Kitamura '660,

as where a claimed improvement on a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement," the claim is unpatentable under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007) (citing KSR v. Teleflex, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)).

Accordingly, Applicant claims a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing KSR, 127 S.Ct. at 1740, 82 USPQ2d at1396.

Accordingly, since the applicant has submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a), because it is no more than the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francis T. Palo whose telephone number is 571-272-6907. The examiner can normally be reached on M-Tu.,Th.-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Francis T. Palo

Francis T. Palo
Primary Examiner
Art Unit 3644